

DECLARATION

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the

invention entitled APPARATUS AND METHODS FOR ACTIVE PROGRAMMABLE MATRIX DEVICES

the specification of which

(Check One): ☐ is attached hereto.
☒ was filed on September 27, 1995 as
 Application Serial No. 08/534,454
 and was amended on (if applicable) _____

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment(s) referred to above. I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with Title 37, Code of Federal Regulations, § 1.56 printed on the reverse side of this Declaration. I hereby claim foreign priority benefits under Title 35, United States Code, § 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed.

Application No.	Country	Date of Filing	Priority Claimed	
			Yes	No

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, § 1.56 which occurred between the filing date of the prior application and the national or PCT international filing date of this application.

Application No.	Date of Filing	Status-Patented, Pending or Abandoned
CIP of 08/304,657 which is a CIP of 08/271,882 which is a CIP of 07/146,504 OB Per Corrected Claim Date 8/26/98	September 9, 1994 July 7, 1994 November 1, 1993	Pending Pending Pending

Res # 31,125

000000: 99020500

POWER OF ATTORNEY

NANOGEN, INC., assignee(s) of the application for United States Letters Patent for an improvement in APPARATUS AND METHODS FOR ACTIVE PROGRAMMABLE MATRIX DEVICES

(Title)

by Michael James Heller, James Patrick O'Connell, Robert David Juncosa, Ronald George Sosnowski, and Thomas Ratcliffe Jackson
(inventors)

☒ executed on even date herewith, or
☐ having Serial No. 08/534,454 filed September 27, 1995,

a copy of the assignment of which is attached hereto, do(es) hereby appoint as attorneys of record with full power of substitution and revocation, to prosecute this application and transact all business in the Patent and Trademark Office connected therewith: Roland N. Smoot, Reg. No. 18,718; Conrad R. Solum, Jr., Reg. No. 20,487; James W. Geriak, Reg. No. 20,233; Robert M. Taylor, Jr., Reg. No. 19,848; Samuel B. Stone, Reg. No. 19,297; Douglas E. Olson, Reg. No. 22,798; Robert E. Lyon, Reg. No. 24,171; Robert C. Weiss, Reg. No. 24,939; Richard E. Lyon, Jr., Reg. No. 26,300; John D. McConaghy, Reg. No. 26,773; William C. Steffin, Reg. No. 26,811; Coe A. Bloomberg, Reg. No. 26,605; J. Donald McCarthy, Reg. No. 25,119; John M. Benassi, Reg. No. 27,483; James H. Shalek, Reg. No. 29,749; Allan W. Jansen, Reg. No. 29,395; Robert W. Dickerson, Reg. No. 29,914; Roy L. Anderson, Reg. No. 30,240; David B. Murphy, Reg. No. 31,125; Bradford J. Duft, Reg. No. 32,219; James C. Brooks, Reg. No. 29,898; Jeffrey M. Olson, Reg. No. 30,790; Steven D. Hemminger, Reg. No. 30,755; Jerrold B. Reilly, Reg. No. 32,293; Paul H. Meier, Reg. No. 32,274; John A. Rafter, Jr., Reg. No. 31,653; Kenneth H. Ohriner, Reg. No. 31,646; Mary S. Consalvi, Reg. No. 32,212; Lois M. Kwasigoch, Reg. No. 35,579; Robert C. Laurenson, Reg. No. 34,208; Kurt T. Mulville, Reg. No. 37,194; James P. Brogan, Reg. No. 35,833; Corinne M. Freeman, Reg. No. 37,625; Joseph H. Lee, Reg. No. 37,664; John C. Kappos, Reg. No. 37,861; Kenneth S. Roberts, Reg. No. 38,283; Timothy L. Epp, Reg. No. 37,768; and

Reg. No. _____

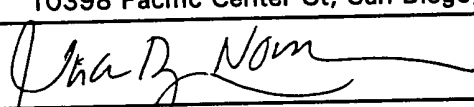
Send Correspondence to:

LYON & LYON
633 W. Fifth St., 47th Fl.
Los Angeles, CA 90071-2066

Direct Calls to:

(213)489-1600

I, the undersigned, declare that I am the (an) assignee of the above-identified application or, if the assignee is a corporation, partnership or other association, I am authorized to make this appointment on behalf of the assignee and I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

	Full Name of Assignee		NANOGEN, INC.	
	Post Office Address		10398 Pacific Center Ct, San Diego, CA 92121	
	Signature of Declarant or Assignee			
	Date			

	Full Name of Assignee			
	Post Office Address			
	Signature of Declarant or Assignee			
	Date			

Full Name of Declarant If Other Than Assignee
Title of Declarant
Address of Declarant

201	FULL NAME OF INVENTOR	FIRST Name MICHAEL	Middle Initial(s) JAMES	LAST Name HELLER	
	RESIDENCE & CITIZENSHIP	City Encinitas	State or Foreign Country California	Country of Citizenship USA	
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202	FULL NAME OF INVENTOR	FIRST Name JAMES	Middle Initial(s) PATRICK	LAST Name O'CONNELL	
	RESIDENCE & CITIZENSHIP	City Del Mar	State or Foreign Country California	Country of Citizenship USA	
	POST OFFICE ADDRESS	Street Address 699 Rimini Road	City Del Mar	State or Ctry California	Zip Code 92014

203	FULL NAME OF INVENTOR	FIRST Name ROBERT	Middle Initial(s) DAVID	LAST Name JUNCOSA	
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204	FULL NAME OF INVENTOR	FIRST Name RONALD	Middle Initial(s) GEORGE	LAST Name SOSNOWSKI	
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	POST OFFICE ADDRESS	Street Address 1013 Adella Avenue	City Coronado	State or Ctry California	Zip Code 92118

205	FULL NAME OF INVENTOR	FIRST Name THOMAS	Middle Initial(s) RATCLIFFE	LAST Name JACKSON	
	RESIDENCE & CITIZENSHIP	City San Diego	State or Foreign Country California	Country of Citizenship USA	
	POST OFFICE ADDRESS	Street Address 7135 Olivetas Avenue	City San Diego	State or Ctry California	Zip Code 92037

206	FULL NAME OF INVENTOR	FIRST Name	Middle Initial(s)	LAST Name	
	RESIDENCE & CITIZENSHIP	City	State or Foreign Country	Country of Citizenship	
	POST OFFICE ADDRESS	Street Address	City	State or Ctry	Zip Code

I further declare that all statements made herein of my own knowledge are true and that all statements made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signature of Inventor 201 Michael James Heller	<i>Michael J. Heller</i>
Date	11/22/95

Signature of Inventor 204 Ronald George Sosnowski	<i>Ronald G. Sosnowski</i>
Date	11/22/95

Signature of Inventor 202 James Patrick O'Connell	<i>James P. O'Connell</i>
Date	11-22-95

Signature of Inventor 205 Thomas Ratcliffe Jackson	<i>Thomas R. Jackson</i>
Date	11/22/95

Signature of Inventor 203 Robert David Juncosa	<i>Robert D. Juncosa</i>
Date	11/22/95

Signature of Inventor 206	
Date	

0000009926560



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APRIL 28, 1996

PTAS

LYON & LYON
DAVID B. MURPHY
633 WEST FIFTH STREET
LOS ANGELES, CA 90071



100130309A

UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

JC490 U.S. PTO
09/597866
06/20/00

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, NORTH TOWER BUILDING, SUITE 10C35, WASHINGTON, D.C. 20231.

RECORDATION DATE: 12/11/1995

REEL/FRAME: 7780/0559

NUMBER OF PAGES: 8

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:
HELLER, MICHAEL JAMES

DOC DATE: 11/22/1995

ASSIGNOR:
O'CONNELL, JAMES PATRICK

DOC DATE: 11/22/1995

ASSIGNOR:
JUNCOSA ROBERT DAVID

DOC DATE: 11/22/1995

ASSIGNOR:
SOSNOWSKI, RONALD GEORGE

DOC DATE: 11/22/1995

ASSIGNOR:
JACKSON, THOMAS RATCLIFFE

DOC DATE: 11/22/1995

ASSIGNEE:
NANOGEN
10398 PACIFIC CENTER COURT
SAN DIEGO, CALIFORNIA 92121

RECEIVED

MAY 06 1996

U.S. PROSECUTION

7780/0559 PAGE 2

SERIAL NUMBER: 08534454
PATENT NUMBER:

FILING DATE: 09/27/1995
ISSUE DATE:

PEARLENE FOSTER, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

FORM PTO-1595

(Rev. 6-93)

OMB No. 0651-0011 (exp. 4/94)

02-07-1996



SET

Dkt. No. 216/054

U.S. DEPARTMENT OF COMMERCE

Patent and Trademark Office

To the Honorable Commissioner of Patents and

100130309

documents or copy the

1. Name of conveying party(ies):

Michael James Heller; James Patrick O'Connell; Robert David Jackson; Ronald George Sosnowski; Thomas Ratcliffe Jackson

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ Other

Execution Date: November 22, 1995

2. Name and address of receiving party(ies):

02/05/96

Name: NANOGEN

Internal Address:

Street Address: 10398 Pacific Center Court

City: San Diego State: CA ZIP 92121

Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: November 22, 1995

A. Patent Application No(s).

B. Patent No(s).

08/534,454

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: LYON & LYON

Internal Address: David B. Murphy

Street Address: 633 West Fifth Street

City: Los Angeles State: CA ZIP 90071

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 3.41): \$ 40.00

☒ Included in the enclosed check☐ Authorized to be charged to deposit account

8. Deposit Account Number:

12-2475

(Attach duplicate copy of this page if paying by deposit account.)

DO NOT USE THIS SPACE

9. Statement and signature

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

David B. Murphy, Reg. No. 31,125

Name of Person Signing & Reg. No.

Signature

December 8, 1995

Date

Total number of pages including cover sheet, attachments, and documents:

Mail documents to be recorded with required cover sheet information to:
Commissioner of Patents & Trademarks, Box Assignments
Washington, D.C. 20231

ASSIGNMENT

WHEREAS, We, **MICHAEL JAMES HELLER**, a citizen of the United States, residing at 1614 Hawk View Drive, Encinitas, California, 92024; **JAMES PATRICK O'CONNELL**, a citizen of the United States, residing at 699 Rimini Road, Del Mar, California, 92014; **ROBERT DAVID JUNCOSA**, a citizen of the United States, residing at 26892 Via Grande, Mission Viejo, California, 92691; **RONALD GEORGE SOSNOWSKI**, a citizen of the United States, residing at 1013 Adella Avenue, Coronado, California, 92118; **THOMAS RATCLIFFE JACKSON**, a citizen of the United States, residing at 7135 Olivetas Avenue, San Diego, California 92037 (hereinafter referred to as "ASSIGNORS"), have invented and own a certain invention entitled "**APPARATUS AND METHODS FOR ACTIVE PROGRAMMABLE MATRIX DEVICES**", for which application for Letters Patent of the United States of America has been filed on September 27, 1995, under Serial No. 08/534,454; and

WHEREAS, **NANOGEN**, a corporation organized and existing under and by virtue of the laws of the State of California and having its principal place of business at 10398 Pacific Center Court, San Diego, California, 92121, (hereinafter referred to as "ASSIGNEE"), is desirous of acquiring the exclusive right, title and interest in, to and under said invention and in, to and under Letters Patent or similar legal protection to be obtained therefor in the United States of America, its territorial possessions and in any and all countries foreign thereto.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNORS hereby sell, assign, transfer and set over unto the said ASSIGNEE, its successors and assigns, the full and exclusive right, title and interest to said invention and to all Letters Patent or similar legal protection, not only in the United States and its territorial possessions, but in all countries foreign thereto, to be obtained for said invention by said application or any continuation, division, renewal, substitute or reissue thereof or any legal equivalent thereof in a foreign country for the full term or terms for which the same may be granted, including all priority rights under the International Convention; and ASSIGNORS hereby authorize and request the Commissioner of Patents and Trademarks to issue said Letters Patent and any legal equivalent thereof to said ASSIGNEE, its successors and assigns, in accordance with this Assignment.

ASSIGNORS hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this Assignment.

ASSIGNORS further covenant that ASSIGNEE will, upon request of ASSIGNEE, be provided promptly with all pertinent facts and documents relating to said application, said invention and said Letters Patent and legal equivalents in foreign countries as may be known and accessible to ASSIGNORS and will testify as to the same in any interference or legal proceeding related thereto and will promptly execute and deliver to ASSIGNEE or its designated legal representative any and all papers, instruments, declarations or affidavits required to apply for, obtain, maintain, issue and enforce said

application, said invention and said Letters Patent and said equivalents thereof in any foreign country which may be necessary or desirable to carry out the purposes thereof.

WITNESS my hand at San Diego, California, this 22nd day of November, 1995.

Michael J. Heller
MICHAEL JAMES HELLER

STATE OF CALIFORNIA)
COUNTY OF San Diego) ss.

On this 22 day of Nov., 1995, before me, a Notary Public, personally appeared **Michael James Heller** known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Seal



Yousef J. Ebadat
Notary Public in and for
said County and State

WITNESS my hand at San Diego, California, this 22nd day of
November, 1995.

James Patrick O'Connell
JAMES PATRICK O'CONNELL

STATE OF CALIFORNIA)

COUNTY OF San Diego)

ss.

On this 22 day of Nov., 1995, before me, a Notary Public,
personally appeared James Patrick O'Connell known to me (or proved to me on the basis of
satisfactory evidence) to be the person whose name is subscribed to the within instrument and
acknowledged to me that he executed the same in his authorized capacity and that by his
signature on the instrument the person, or the entity upon behalf of which the person acted,
executed the instrument.


WITNESS my hand and official seal.

Seal



Yousef J. Ebadat
Notary Public in and for
said County and State

WITNESS my hand at San Diego, California, this 22nd day of November, 1995.

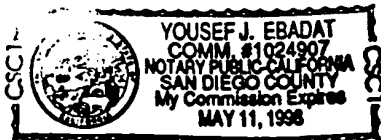

ROBERT DAVID JUNCOSA

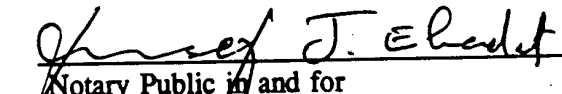
STATE OF CALIFORNIA)
)
COUNTY OF San Diego) ss.

On this 22 day of Nov., 1995, before me, a Notary Public, personally appeared Robert David Juncosa known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Seal




Notary Public in and for
said County and State

WITNESS my hand at San Diego, California, this 22nd day of
November, 1995.


RONALD GEORGE SOSNOWSKI

STATE OF CALIFORNIA)

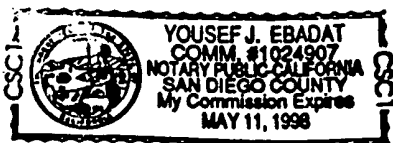
COUNTY OF San Diego)

ss.

On this 22 day of Nov., 1995, before me, a Notary Public, personally appeared Ronald George Sosnowski known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Seal




Notary Public in and for
said County and State

WITNESS my hand at San Diego, California, this 22nd day of November, 1995.


THOMAS RATCLIFFE JACKSON

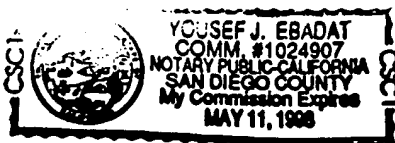
STATE OF CALIFORNIA)
COUNTY OF San Diego)

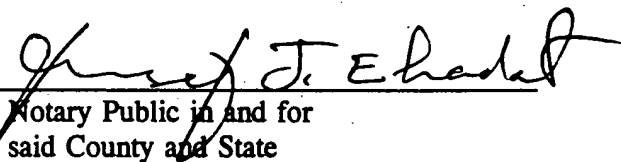
SS.

On this 22 day of Nov., 1995, before me, a Notary Public, personally appeared **Thomas Ratcliffe Jackson** known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Seal




Notary Public in and for
said County and State